

Application No. 10/714,233
AMENDMENT AND RESPONSE dated December 15, 2005
Reply to Office Action of September 15, 2005

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listing, of claims in the application:

Listing of Claims:

1. (Currently amended) An apparatus comprising:
 - a flexible substrate having first and second portions;
 - a flexible active display supported by the first flexible substrate portion;
 - a flexible audio transducer proximally disposed with respect to the flexible active display and supported by the second flexible substrate portion;
 - an acoustic dampener operably coupled between the first flexible substrate portion and the second flexible substrate portion and only partially disposed about the flexible audio transducer to substantially fully separate the first portion from the second portion.
2. (Cancelled)
3. (Previously presented) The apparatus of claim 1 further comprising at least a second flexible audio transducer proximally disposed with respect to the flexible active display.
4. (Previously presented) The apparatus of claim 3 wherein the flexible substrate that supports the flexible active display and the flexible audio transducer also supports the at least a second flexible audio transducer.

5. (Previously presented) The apparatus of claim 1 further comprising a plurality of flexible audio transducers disposed substantially equidistant from one another about the flexible active display.

6. (Previously presented) The apparatus of claim 1 wherein the flexible substrate comprises:

- a first flexible substrate that supports the flexible active display;
- a second flexible substrate that supports the flexible audio transducer.

7. (Cancelled)

8. (Previously presented) The apparatus of claim 1 wherein the acoustic dampener includes a vacuum disposed therein.

9. (Previously presented) The apparatus of claim 1 wherein the acoustic dampener comprises a discontinuous material.

10. (Original) The apparatus of claim 9 wherein the discontinuous material comprises a woven structure.

11. (Original) The apparatus of claim 9 wherein the discontinuous material includes a plurality of holes disposed through the material.

12. (Original) The apparatus of claim 6 wherein the first and second flexible substrate are comprised of a similar material.

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13. (Original) The apparatus of claim 6 wherein the first and second flexible substrate are comprised of differing materials.

14. (Original) The apparatus of claim 1 wherein the flexible audio transducer is comprised of at least one layer of a dielectric elastomer polymer material.

15. (Original) The apparatus of claim 14 wherein the at least one layer of a dielectric elastomer polymer material has a compliant electrode material disposed on at least one side thereof.

16. (Original) The apparatus of claim 15 wherein the at least one layer of a dielectric elastomer polymer material has a compliant electrode material disposed on both of opposing sides thereof.

17. (Previously presented) The apparatus of claim 1 further comprising a selective rigidizer disposed proximal to the flexible audio transducer.

18. (Previously presented) The apparatus of claim 1 further comprising a rigid backing disposed at least partially coextensively with the flexible audio transducer.

19. (Previously presented) The apparatus of claim 1 further comprising a housing and a retraction mechanism disposed therein that is operably coupled to the flexible active display and the flexible audio transducer.

20. (Currently amended) A method of forming a flexible combined display and speaker apparatus, comprising:

- providing a flexible substrate having first and second portions;
- supporting a flexible active display with the first flexible substrate portion;
- supporting a flexible speaker with the second flexible substrate portion;
- disposing an acoustic dampener between the first flexible substrate portion and the second flexible substrate portion and only partially disposed about the flexible speaker to substantially fully separate the first portion from the second portion.

21. (Previously presented) The method of claim 20 further comprising:

- temporarily disposing the flexible substrate, and hence the flexible active display and the flexible speaker, in a non-planar configuration.

22. (Original) The method of claim 21 wherein temporarily disposing the flexible substrate, and hence the flexible active display and the flexible speaker, in a non-planar configuration comprises rolling the flexible substrate, and hence the flexible active display and the flexible speaker, into a substantially cylindrical shape.

23. (Previously presented) The method of claim 22 further comprising:

- retractably disposing at least a portion of the substantially cylindrical shape into a housing.

24. (Original) The method of claim 21 wherein temporarily disposing the flexible substrate, and hence the flexible active display and the flexible speaker, in a non-planar configuration comprises folding the flexible substrate.

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25. (Currently amended) An integrated display and speaker comprising:

- flexible display means for selectively providing an active display on a conformably flexible display surface;
- flexible speaker means integrally configured with respect to the flexible display means for selectively providing audible sound;
- acoustic dampening means operably and integrally coupled between the flexible display means and the flexible speaker means and only partially disposed about the flexible speaker means to substantially fully separate the flexible speaker means from the flexible display means.

26. (Original) The integrated display and speaker of claim 25 wherein the flexible speaker means comprises a dielectric elastomer polymer.

27. (Original) The integrated display and speaker of claim 26 wherein the dielectric elastomer polymer has a compliant electrode material disposed on at least one side thereof.

28. (Original) The integrated display and speaker of claim 27 wherein the dielectric elastomer polymer has a compliant electrode material disposed on at least two opposing sides thereof.

29. (Original) The integrated display and speaker of claim 28 wherein the compliant electrode material on both sides of the dielectric elastomer polymer comprises a substantially identical material.

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30. (Previously presented) The apparatus of claim 1 further comprising a plurality of flexible audio transducers proximally disposed with respect to the flexible active display and supported by the flexible substrate, wherein at least two of the flexible audio transducers comprise speakers.